

*Hormonotus modestus.**Lamprophis modestus*, Dum. & Bibr. 1854.*Hormonotus audax*, Hallow., 1857.*Hormonotus modestus*, Günther, 1862.*Heterolepis glaber*, Jan, 1863.*Boodon (Lamprophis) modestus*, Peters, 1875.*Boodon (Alopecion) Fossii*, Fischer, 1888.

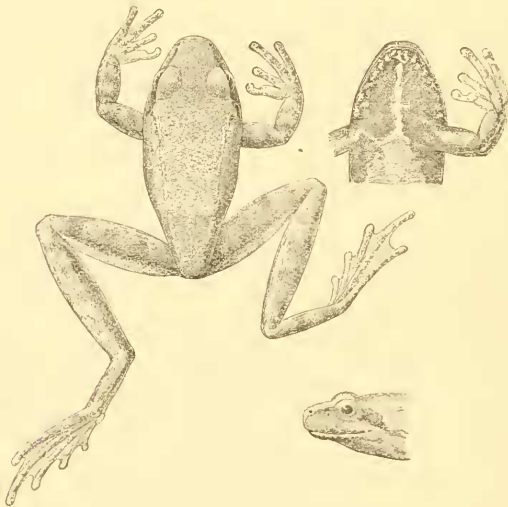
3. *Heterolepis poensis*, Smith.—I am glad to say the type specimen is not lost. It is still in the British Museum, where it was registered in April 1847. The fact that its tail is mutilated accounts for the small number (67) of subcaudal shields. The *H. bicarinatus* of Duméril and Bibron (1854) is merely a synonym of *H. poensis*, Smith (1847).

## XLVI.—Description of a new European Frog.

By G. A. BOULENGER.

*Rana græca*, sp. n.

Head a little broader than long, moderately depressed. Snout very short, rounded, not at all prominent, as long as the diameter of the eye; loreal region even less oblique than



in *R. temporaria* and *R. iberica*, very distinctly concave; nostril a little nearer the end of the snout than to the eye;

the distance between the nostrils a little greater than the interorbital width, which equals the width of the upper eyelid. Tympanum rather indistinct, half the diameter of the eye; its distance from the eye equals two thirds or three fourths its diameter.

Fore limb nearly as long as the body. First finger not extending beyond second; tips of fingers very obtuse, swollen; subarticular tubercles strongly developed. Hind limb very long, the tibio-tarsal articulation reaching beyond the tip of the snout. Tibia as long as the fore limb and longer than the foot. Toes nearly entirely webbed, even in the very young, with obtuse, swollen tips; subarticular tubercles large and prominent. Inner metatarsal tubercle soft, oval, measuring half the length of the inner toe; a very distinct tubercle at the base of the fourth toe.

Skin of upper parts rough with small warts.

Dorso-lateral fold narrow and not very prominent, sometimes interrupted, running straight from the temple to the groin; the distance between the dorso-lateral folds on the scapular region equals one fourth the length from snout to vent.

Grey or grey-brown above, with very indistinct darker spots and a band across the interorbital space; glandular lateral folds lighter; loreal region down to the border of the lip dark; a black canthal streak and a black temporal spot; a light streak from below the eye to the angle of the mouth; no large spots on the flanks; limbs with dark cross bands; hinder side of thighs dark brown with whitish dots. Throat much obscured with blackish-brown marblings, almost black, with a median white streak; a few large dark brown spots on the breast; belly white; lower surface of limbs reddish flesh-colour.

Vomerine teeth in two small groups, as in *R. temporaria* and *R. iberica*.

	millim.	millim.
From snout to vent .....	32	26
Length of head .....	12	10
Width of head .....	13	11
Diameter of eye .....	4	3.5
Interorbital width .....	3.5	3
From eye to nostril .....	2.5	2.5
"    "    end of snout .....	4.5	4
Tympanum .....	2	1.5
From eye to tympanum .....	1.5	1
Fore limb .....	22	18
Hind limb .....	62	50
Tibia .....	22	17
Foot .....	19	15
Inner toe .....	4	3
Inner metatarsal tubercle .....	2	1.5

The specimens described are unfortunately not adult, and the male is still unknown to me.

The tadpole, although more nearly resembling that of *R. temporaria* than any other European species, differs from all its congeners in having the mouth quite as wide as the inter-orbital space, which equals once and a half the distance between the nostrils. The labial dentition is more developed even than in *R. temporaria*, the teeth forming four or five series in the upper lip, of which the second is but narrowly interrupted in the middle, and four in the lower lip; the latter are either all continuous, occupying nearly the whole width of the lip, or the fourth (counting from the labial edge) is broken up in the middle. A single series of papillæ on the lower labial edge. Tail obtuse, once and two thirds the length of the body, its depth about one third its length. Grey above, closely speckled with black, whitish beneath; muscular portion of tail reticulated with black; caudal crests with small black spots or arborescent markings.

	millim.
Total length.....	48
Body.....	18
Width of body.....	12
Tail .....	30
Depth of tail .....	10

It was through the tadpoles that I became aware of the existence in Greece of the species which I have now the pleasure of describing. About a year ago I received from Dr. Küper, of Athens, several frog-larvæ, obtained on the Parnassos, which differed from anything I had seen before. One of the specimens was sufficiently near transformation to show remarkably long legs; and as *Rana Latastii*, of which I did not know the tadpole nor could refer to any description of it, had recently been recorded by Bœttger\* from the neighbouring Korax Mountains, I thought I might safely refer it to that species. But having sent one of these larvæ to M. Héron Royer, the well-known connoisseur of European tadpoles, I was informed by him that it could not belong to *R. Latastii*, of which he had himself reared the tadpole; his letter was kindly accompanied by a specimen of the *R. Latastii*-larva, which, when I examined it a short time ago, left no doubt in my mind that my Parnassos tadpoles were erroneously named. The specimens obtained by v. Oertzen in the Korax Mountains being all in Berlin, as I was informed by my friend Dr. Bœttger, to whom I had

\* Sitz. Akad. Berl. 1888, p. 148.

expressed my doubts as to the correctness of his determination, I applied to Professor Möbius, who had the great kindness of sending me for examination two of the Oertzen specimens. These proved, as I fully expected, to belong to a new species (identical with my specimens from the Parnassos), closely allied to *R. Latastii* and *R. iberica*, and, on the whole, nearer the latter, as may be seen from the following analysis:—

#### Adult.

*R. græca*.—Distance between the nostrils a little greater than the interorbital width; tympanum rather indistinct; first finger not extending beyond second; inner metatarsal tubercle half the length of the inner toe.

*R. iberica*.—Distance between the nostrils a little greater than the interorbital width; tympanum very distinct; first finger not extending, or extending but very slightly, beyond second; inner metatarsal tubercle one third the length of the inner toe.

*R. Latastii*.—Distance between the nostrils not greater than the interorbital width; tympanum very distinct; first finger extending beyond second; inner metatarsal tubercle one third the length of the inner toe.

#### Tadpole.

*R. græca*.—Series of labial teeth  $\frac{4-5}{4}$ , second upper continuous or narrowly interrupted, first lower at least two thirds the length of the second; width of mouth quite as great as the interocular space, which equals about once and a half the distance between the nostrils; tail obtusely pointed, about once and two thirds the length of the body.

*R. iberica*.—Series of labial teeth  $\frac{3-4}{4}$ , second upper widely interrupted in the middle, first lower not half as long as second; width of mouth much less than the interocular space, which equals nearly twice the distance between the nostrils; tail obtusely pointed, about once and a half the length of the body.

*R. Latastii*.—Series of labial teeth  $\frac{3}{4}$ , second upper widely interrupted in the middle, first lower not half as long as second; width of mouth less than the interocular space,

which equals once and a half the distance between the nostrils; tail acutely pointed, twice as long as the body.

The descriptions I gave of *R. iberica* and *R. Latastii* in 1879 were taken from a small number of specimens. I have rewritten the following, which I append for comparison with *R. graeca*, upon the rich material which is now in the British Museum, viz. fourteen specimens of *R. iberica* (Coimbra, Serra de Gerez, Murça in Tras os Montes) and thirty-five of *R. Latastii* (Novara, Varese, Venice, Cordovado, Monte Lessini, Padua, Calcinaro, Castelfranco, Treviso, Florence, Bertónico, Turin).

*Rana iberica*, Blgr.

Head as long as broad or a little broader than long, moderately depressed. Snout short, obtuse, rounded; loreal region not very oblique, slightly concave; nostril equidistant from the eye and the end of the snout, or slightly nearer the latter; the distance between the nostrils a little greater than the interorbital width, which equals the width of the upper eyelid. Tympanum distinct, its diameter one half to three fifths the diameter of the eye; the distance between the eye and the tympanum equals two thirds to three fourths the diameter of the latter.

Fore limb nearly as long as the body. First finger not extending, or extending but very slightly, beyond second. Subarticular tubercles of fingers moderately developed.

Hind limb very long, the tibio-tarsal articulation reaching beyond the tip of the snout in the adult, to the tip of the snout in the young. Tibia but slightly shorter than the fore limb, and nearly as long as the foot. Toes three fourths or even nearly entirely webbed, the web more or less crescentically notched; subarticular tubercles moderately large and prominent. Inner metatarsal tubercle small, soft, oval, measuring about one third the length of the inner toe; a small and more or less indistinct tubercle is usually present at the base of the fourth toe.

The skin may be perfectly smooth, or the back rough with granules and small round warts; hinder side of thighs granular. Dorso-lateral fold narrow but rather prominent, running straight from the temple to the groin; the distance between the dorso-lateral folds on the scapular region equals two ninths to one fourth the length from snout to vent.

Coloration very variable. Upper parts yellowish brown, greyish brown, or reddish, with or without dark brown spots;

not unfrequently the back is largely blotched with yellowish and the sides may be spotted with pure white; a dark brown  $\Lambda$ -shaped marking sometimes present on the scapular region; the glandular folds usually with a dark brown outer margin; a dark brown canthal streak and a large dark brown or black temporal spot; a whitish streak from below the eye to the angle of the mouth; limbs with dark cross bands, which may be very indistinct; hinder side of thighs usually speckled or marbled with dark brown. Lower parts whitish, rosy under the limbs, and more or less profusely spotted or marbled with brown, especially on the throat and breast; the middle line of the throat, however, usually unspotted. Iris golden, brown in its lower moiety.

	Serra de Gerez.					Coimbra.		
	♂.	♀.	♀.	♀.	♂.	♂.	♀.	♀.
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
From snout to vent . . . . .	42	54	47	46	32	40	50	48
Length of head . . . . .	14	17	15	15	12	14	16	16
Width of head . . . . .	15	20	16	16	12	15	17	18
Diameter of eye . . . . .	4	5	5	5	4	4	5.5	5.5
Interorbital width . . . . .	3	4	4	4	3	3.5	4	4
From eye to nostril . . . . .	3	4	3.5	3.5	2.5	3	3.5	3.5
„ „ end of snout . . . . .	6	8	7	7	5	6	7	7
Tympanum . . . . .	2.5	3	2.5	2.5	2	2.5	3	3
From eye to tympanum . . . . .	2	2	2	2	1.5	2	2	2
Fore limb . . . . .	26	35	30	29	22	28	31	31
Hind limb . . . . .	78	98	87	83	60	74	86	90
Tibia . . . . .	24	31	28	27	20	24	28	29
Foot . . . . .	26	30	28	27	18	24	27	28
Inner toe . . . . .	6	7	7	7	4	5.5	6.5	6.5
Inner metatarsal tubercle . . . . .	2	2.5	2	2	1.5	2	2	2

*Rana Latasti*, Blgr.

Head nearly as long as broad, sometimes slightly broader than long, sometimes slightly longer than broad, more depressed than in *R. temporaria* and *R. iberica*, less so than in *R. agilis*. The snout varies much in shape; it may be short and rounded, as in a platyrrhine *R. temporaria*, or as long, as pointed, and as prominent as in a typical *R. arvalis*; loreal region more oblique than in *R. temporaria* and *R. iberica*, less so than in *R. agilis*; nostril equidistant from the eye and the end of the snout, or slightly nearer the latter; the distance between the nostrils equals the interorbital width, which equals the width of the upper eyelid. Tympanum very



distinct, its diameter one half to two thirds the diameter of the eye; the distance between the eye and the tympanum equals one half to two thirds the diameter of the tympanum.

Fore limb as long as or a little longer than the tibia. First finger extending beyond the second. Subarticular tubercles of fingers moderately developed.

Hind limb very long, the tibio-tarsal articulation reaching beyond the tip of the snout; tibia as long as the foot or a little longer. Toes three-fourths webbed in the female, the web crescentically emarginate, three-fourths or nearly entirely webbed and with a straight or even convex border to the web in the breeding male; subarticular tubercles moderately large and prominent; inner metatarsal tubercle small, soft, oval, measuring about one third the length of the inner toe; a small outer metatarsal tubercle at the base of the fourth toe is usually present.

Skin smooth, or with a few small flat warts scattered on the back; back of the thighs granular. Dorso-lateral glandular fold narrow and more or less prominent, running nearly straight from the temple to the groin; the distance between the dorso-lateral folds on the scapular region equals one fourth to one fifth the length from snout to vent.

The coloration varies less than in *R. temporaria* and *R. iberica*, but more than in *R. agilis*. Upper parts greyish or reddish brown, usually with a few dark brown spots, a dark cross bar between the eyes, and a  $\wedge$ -shaped marking on the scapular region; small orange or red spots may be present on the back, and, very rarely, a few ink-black blotches; the glandular lateral folds usually not paler than the surroundings, sometimes with a dark brown outer margin; no large spots on the flanks; a canthal streak and sometimes the whole of the loreal region dark brown; a dark brown or blackish temporal spot; a light streak from below the eye to the angle of the mouth; hind limbs with well-marked dark brown cross bars; hinder side of thighs speckled or spotted with brown. Lower parts pinkish white, the throat and the hind limbs often of a bright pink; throat and breast spotted or mottled with grey or brown, with the median line of the throat and usually a cross line on the breast unspotted, the two forming a  $\perp$ -shaped light marking; belly and lower surface of thighs sometimes spotted, sometimes immaculate. Iris golden, much obscured with brown in its lower half.

	Castelfranco.		Turin.	Varese.		Novara.		Venice.	
	♂.	♂.	♀.	♂.	♂.	♂.	♀.	♀.	♀.
From snout to vent . . . . .	48	43	58	55	54	45	58	56	56
Length of head . . . . .	16	15	18	17	17	15	17	18	18
Width of head . . . . .	15	14	18	18	18	15	18	18	18
Diameter of eye . . . . .	5	4.5	5.5	5.5	5.5	5	5.5	6	6
Interorbital width . . . . .	4	3.5	4.5	4.5	4	3.5	4	4.5	4
From eye to nostril . . . . .	3.5	3.5	4	4	4	3.5	4	4	4
„ „ end of snout . . . . .	7	6.5	8	8	7.5	6.5	8	8	8
Tympanum . . . . .	3	2.5	3.5	4	3.5	2.5	4	3.5	4
From eye to tympanum . . . . .	2	1.5	2.5	2	2	1.5	2	2	2
Fore limb . . . . .	30	28	37	35	35	29	34	37	35
Hind limb . . . . .	84	76	109	95	97	86	103	104	104
Tibia . . . . .	28	25	36	33	32	28	35	35	34
Foot . . . . .	26	24	32	31	32	28	34	33	32
Inner toe . . . . .	6	5	7.5	6.5	7	6.5	7	7.5	6.5
Inner metatarsal tubercle . . . . .	2	1.5	2.5	2.5	2.5	2	2.5	2.5	2

XLVII.—*Natural History Notes from H.M. Indian Marine Survey Steamer 'Investigator,' Commander R. F. Hoskyn, R.N., commanding.*—Series II., No. 1. *On the Results of Deep-sea Dredging during the Season 1890-91.* By J. WOOD-MASON, Superintendent of the Indian Museum, and Professor of Comparative Anatomy in the Medical College of Bengal, and A. ALCOCK, M.B., Surgeon I.M.S., Surgeon-Naturalist to the Survey.

[Continued from p. 286.]

#### Family Sergestidæ.

#### SERGESTES, H. M.-Edw.

#### 22. *Sergestes bisulcatus*, W.-M.

*Sergestes bisulcatus*, W.-M. Ann. & Mag. Nat. Hist. (6) vii. 1891, p. 190, ♂ ♀.

A mutilated male and female from Station 109, 738 fathoms. Colour in the fresh state deep crimson.

#### 23. *Sergestes mollis*, S. I. Smith.

*Sergestes mollis*, S. I. Smith, Rep. U. S. Fish. Comm. 1884, p. 419 [75], ♂ ♀, 1886, pl. xx. figs. 3-5, ♂ ♀.

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